

App. No. 10/522,045
Office Action mailed May 14, 2008

REMARKS

Favorable reconsideration is respectfully requested in view of the above amendments and following remarks. Claim 1 has been amended. The limitation in claim 1 concerning substantially all of the liquid phase part of the liquid sample being absorbed by the water-absorbing resin particles is supported by, for example, page 6, lines 16-20. The limitation in claim 1 concerning the collecting solution being poured into the centrifugation tube without separating the liquid phase part absorbed by the water-absorbing resin particles from the water-absorbing resin particles that have absorbed the liquid phase part is supported by, for example, page 6, lines 16-29. Claims 1, 4-12 and 14-26 are pending.

Claims 1, 6-8, 10, 14 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Publication No. 2001/0009759) in view of Lyman (US Patent No. 4683058) and Tsuchiya (US Patent No. 5747277). Applicants respectfully traverse the rejection.

Claim 1 requires pouring the liquid sample into a centrifugation tube so that substantially all of a liquid phase part of the liquid sample is absorbed by the water-absorbing resin particles. Claim 1 further requires the collecting solution to be poured into the centrifugation tube without separating the liquid phase part absorbed by the water-absorbing resin particles from the water-absorbing resin particles that have absorbed the liquid phase part.

Sato teaches that the virus-binding particles are added to a sample in the form of a virus-separating reagent prepared by the virus-binding particles in a medium such as saline. Sato further teaches that the amount of virus-binding particles in the virus-separating agent should not be too large with respect to the sample, as its addition in too large a quantity makes it necessary to use a detachment solution in a large quantity when bound viruses are detached in a post stage, resulting in a low separation efficiency. Sato also teaches that virus-binding particles which

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have adsorbed thereon the viruses in a sample are then separated from the sample by centrifugation, and that the virus-bound particles thus separated are then washed with a buffer, and thereafter moved to the step of separating viruses from the particles.

As such, it can be understood from this description that Sato teaches a method where a liquid sample is added into a virus-separating agent in an amount greater than the water-absorbing capacity of the virus-binding particles and that the liquid phase part of the sample is not absorbed by the particles, as the sample is added into an agent in which the particles are already dispersed in an aqueous medium. It can be further understood from this description that Sato teaches the step of separating the virus-binding particles which have viruses adsorbed thereon from the liquid sample by centrifugation, and a separate post step of detaching the viruses from the virus-binding particles using a detachment solution.

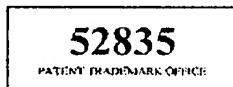
On the other hand, claim 1 requires substantially all of a liquid phase part of the liquid sample to be absorbed by the water-absorbing resin particles, and the collecting solution to be poured into the centrifugation tube without separating the liquid phase part absorbed by the water-absorbing resin particles from the water-absorbing resin particles that have absorbed the liquid phase part. Nothing in Sato teaches or suggests adding the sample into the virus-separating agent so that substantially of the liquid part of the sample is absorbed by the virus-binding particles, nor detaching the viruses from the virus-binding particles without separating the virus-binding particles from the sample. Accordingly, claim 1 and the dependent claims therefrom are patentable over Sato for at least these reasons.

Lyman and Tsuchiya do not remedy the deficiencies of Sato. In particular, Lyman teaches a filter tube that is filled with a mixture of permeable and non-permeable materials, and when the composite centrifuge tube and filter tube is spun, the permeable materials flow through

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while the non-permeable materials are retained in the filter tube. Tsuchiya teaches choosing a filter with an appropriate pore size for detecting a particular organism. However, nothing in the references teaches or suggests pouring the liquid sample into a centrifugation tube so that substantially all of a liquid phase part of the liquid sample is absorbed by the water-absorbing resin particles, and pouring the collecting solution into the centrifugation tube without separating the liquid phase part absorbed by the water-absorbing resin particles from the water-absorbing resin particles that have absorbed the liquid phase part. Accordingly, claim 1 and the dependent claims are patentable over Sato, Lyman and Tsuchiya, taken alone or together.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions or concerns regarding this communication can be directed to the attorney-of-record, Douglas P. Mueller, Reg. No. 30,300, at (612) 455.3804.

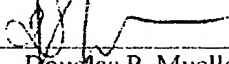


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DPM/ym

Respectfully submitted,

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